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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,199	09/26/2003	William C. Albertson	GP-302888	8941
7590	11/14/2005			EXAMINER SAN MARTIN, EDGARDO
LESLIE C. HODGES General Motors Corporation Legal Staff, Mail Code 482-C23-B21 P.O. Box 300 Detroit, MI 48265-3000			ART UNIT 2837	PAPER NUMBER

DATE MAILED: 11/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/672,199	ALBERTSON ET AL.	
	Examiner	Art Unit	
	Edgardo San Martin	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 26 September 2003.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-15 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-15 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/26/03</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 3 – 6, 8 – 10, 12 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Ichinomiya (JP 04121407).

With respect to claims 1, 6, 12 and 13, Ichinomiya teaches a method of attenuating exhaust noise from an engine, wherein the engine is a longitudinally oriented engine, with a first group of active cylinders connected to a first exhaust manifold (Fig.3, Item 3) and a second group of deactivatable cylinders connected to a second exhaust manifold (Fig.3, Item 4), the method comprising connecting (Fig.3, Item 7) the second exhaust manifold to the first exhaust manifold such that the second exhaust manifold acts as a resonator to attenuate sound from the first group of active cylinders when the second group of cylinders is deactivated (Figs.1 and 3; Abstract).

With respect to claims 3 and 8, Ichinomiya teaches further comprising selectively adjusting the effective length of the second manifold by closing a valve (Fig.1, Item B) positioned in the second manifold.

With respect to claims 4 and 9, Ichinomiya teaches further comprising connecting the first and second exhaust manifolds with a pipe (Fig.3, Item 7), and providing a

downstream valve (Fig.1, Item B) in the second manifold between a tailpipe and the point at which the second manifold connects to the pipe.

With respect to claims 5 and 10, Ichinomiya teaches further comprising providing a crossover valve (Fig.3, Item 8) in the pipe (fig.3, item 7) to selectively connect the first and second manifolds (Fig.3, Items 3 and 4).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2, 7, 11, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichinomiya (JP 04121407).

Ichinomiya teaches the limitations discussed in a previous rejection, but fail to explicitly disclose the limitations described in the abovementioned claims.

Regarding claims 2, 7 and 14, the Examiner consider that it would have been an obvious matter of design choice to select the length of the manifold to form a one-quarter wave tuner because it is well known in the art of acoustics that forming a resonator with a depth of one-quarter of the wavelength desired to be attenuated would create a counterwave that would provide a destructive interference effect that would help attenuate the noise wave.

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With respect to claim 11, the Examiner takes Official Notice that it is well known in the art of automobile engines to employ a transversely oriented engine, such as those employed in compact cars with front traction.

With respect to claim 15, the Examiner takes Official Notice that it is well known in the art of acoustics to restrict the fluid flow coming in and out of a resonating chamber in order to create the Helmholtz resonator. In addition, it is well known in the art of fluid handling to employ valves that also work as restrictors.

Conclusion

3. The attached hereto PTO Form 892 lists prior art made of record that the Examiner considered it pertinent to applicant's disclosure.

Contact Information

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edgardo San Martin whose telephone number is (571) 272-2074. The examiner can normally be reached on 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on (571) 272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Edgardo San Martín
Primary Examiner
Art Unit 2837
Class 181
November 9, 2005